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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/640,710 | 08/18/2000 | Blair Lewis Stringam | REC-6201 | 6471 |

7590 03/01/2002

E Philip Koltos
Division of General Law - Office of the Solicitor
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1849 C Street NW Room 6351
Washington, DC 20240

EXAMINER

MARTIR, LILYBETT

ART UNIT PAPER NUMBER

2855

DATE MAILED: 03/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/640,710

Applicant(s)

STRINGAM ET AL.

Examiner

Lilybett Martir

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Combs et al. (Pat. 4,221,004) in view of Wissenbach et al. (Pat. 5,633,809). Combs et al. teaches the claimed invention, including:

- A sensor for determining as in element 20, using a measurement structure in the open channel as in element 12 and for producing a corresponding output signal; a central processing unit for receiving said output signal from said sensor, for calculating total water flow in the channel based on said output signal and for producing a total flow signal based on the calculated total water flow (Col. 4-5, lines 51-5), as in claim 1.
- An ultrasonic sensor as in element 20 and said measurement structure comprising a weir or flume as disclosed on Col. 4, lines 34-35, as in claim 2.
- Regarding claims 6-8, said claims deal with the way in which data is manipulated and calculations are made and exist as an essential constituent of the claimed invention, and also said limitations have no significance when any calculating means is capable of performing such manipulations and an

element having the capabilities to calculate the volume of liquid flowing in the channel is taught in the teachings of Combs et al. (Col. 4-5, lines 51-5).

But he does not teach:

- A display device for receiving flow signals from a central processing unit; and a single housing for housing said sensor, said central processing unit, and said display device, as in claim 1.
- A liquid crystal display device, as in claim 3.
- A housing that comprises a top portion and a bottom portion mechanically connected to the top portion as formed, as in claim 4.
- A downwardly depending member as connected to said bottom portion of said housing, and wherein a sensor is received in said member, as in claim 5.

Wissenbach et al. teaches a flow monitoring apparatus that has a display device that is a liquid crystal display (Col. 6, lines 52-53) as in element 4 for receiving flow signals and displaying them, a single housing as in element 1 for housing a plurality of elements such as the microprocessor and the display device (Col. 6, lines 44-47), and a depending member that receives a sensor such as element 41 as noted in Figure 3.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the measurement device of Combs et al. using the teachings of the flow monitoring apparatus of Wissenbach et al. by providing said measurement device with a housing, a liquid crystal display, and a depending member for receiving the sensor, for the purpose of providing means to protect said measuring device from environmental factors that may affect its accuracy

by damaging it's components, for providing means necessary to display the data related to the flow measurements produced by said device to a user, and for providing means to position said sensor in a fixed manner that would allow the user to direct the ultrasonic signals produced by it in a preferred manner therefore improving the versatility and the reliability of said device.

Regarding claims 9-12, said claims deal with the method of using the claimed device and exist as an essential constituent of the claimed invention, therefore those claims are said to be inherently disclosed in the combination of the teachings of Combs et al. in view of Wissenbach et al.

Response to Arguments

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art considered pertinent during examination of the examined application is:

- Vander Heyden (Pat. 3,996,798) Open channel flow meter.
- Gates (Pat. 4,480,466) Apparatus and method for determining liquid flowrate.


Art Unit: 2855


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.


Lilybett Martir
Examiner
Art Unit 2855


February 19, 2002


Benjamin R. Fuller
Supervisory Patent Examiner
Technology Center 2800